

*The Influence of Saliency and Frequency of Morphosyntactic Structures on
Attention to Recasts during Spoken Interaction*

Nutchaya Yatsom, Khon Kaen University, Thailand
Chomraj Patanasorn, Khon Kaen University, Thailand

The Asian Conference on Language Learning 2015
Official Conference Proceedings

Abstract

Studies on the effectiveness of recasts have drawn mixed results, which is possibly due to the role of attention to recast, or lack thereof, during interaction. According to Goldschneider and DeKeyser (2001), it is suggested that attention is associated with saliency and frequency of structures. Thus, the purpose of this study was to examine how different levels of saliency and frequency affect interlocutor's attention to recast. Learners engaged in interaction tasks that elicited separate morphosyntactic structures with four different dyadic composites: +salient/ + frequent, +salient/ -frequent, -salient/ + frequent, and -salient/ -frequent. The amount of recast given on each dyad was controlled in order to control the effects of frequency of the recast itself. To determine which recasts were attended to for which structure, instances of uptake were identified. In addition, after completion of the interaction tasks, written and spoken tests on the target structures were given. The number of uptakes together with performance on the tests was compared between dyads. Statistical differences in the number of uptakes and test scores between dyads would suggest differences in levels of attention to recast as a function of differences in levels of saliency and frequency of target structures. The findings demonstrate that saliency and frequency group outperformed other three target morphosyntactic structures and they can play crucial role for learners to pay attention to recast.

Keywords: interaction, attention, recast, saliency, frequency

iafor

The International Academic Forum

www.iafor.org

Introduction

English plays a major role in many countries and has been taught all over the world (Nunan 2003). High proficiency in English is required in order to succeed in many areas of society such as science, business, education and technology (Foley, 2005). As a result, English has been promoted and teaching methods developed in the classroom to be the most effective in many countries including Thailand.

In Thailand, English is regarded to be an important subject because English proficiency is considered to be a requirement for one's career and study in the future. People who have a high proficiency in English can perform better in many fields such as education, science, technology and business (Wiriyachitra, 2002). The Ministry of Education realized the importance of English and included English into the Basic Education Core Curriculum (2008) as a foreign language. Even though Thai students have learned English for many years, they consider English is difficult to use in real life communication (Khamkhien, 2010). Thai students' English proficiency needs to be improved to reach the *lingua franca* criteria.

The past simple tense, especially irregular verbs, is one of the problematic structures for Thai learners of English which cause may be due to the fact that they are not accustomed to conjugating verb form to express the event (Smyth, 2001). Comparative adjectives are the other problematic structure for Thai learners which may be caused from the complicated rules and exceptions to understand and memorize (Smyth, 2001). This may be due to the fact that their native language (Thai) does not need to conjugate verb form to communicate like English, German and French (Han, 2002). Moreover, Thai learners do not usually receive oral production practice as often as they should in classes (McDonough, 2007). Vanden Bramden (2007) suggests that learners are given explicit explanation of forms but do not have enough opportunities to practice their language learning in class and real life situations, they seem to have difficulty when they need to communicate and speak English.

However, there are also disagreements on the effectiveness of recasts on L2 language learning which is possibly due the role of attention to recast during interaction or the level of learners' language proficiency level. Moreover, recasts are debated to be beneficial in the way of disrupting the flow of communication, the ability of learners to notice recasts in classroom interaction (Nicholas, Lightbrown and Spada 2001). Schmidt (2001) suggests that input does not become intake for language acquisition unless it is noticed and it is best achieved by the frequency of interactional feedback which relates to attention and enhances the benefits for language learners. The purpose of this study was to investigate how interactional feedback recast could help learners improve their language performance. Moreover, it aims to investigate how saliency and frequency affect to language learning development of which there is no research to confirm about this point of view. It may be caused from many factors and it becomes an inspiration to study about this issue.

Interaction Hypothesis

According to Long (1996), Interaction Hypothesis is the theory of second language acquisition, in which refers to the development of language improvement by promoting face to face communication. Additionally, Long also claimed that

Interaction hypothesis proposed that corrective feedback obtained during interaction stimulates interlanguage development because it links input, internal learner ability; especially selective attention and output in productive ways. Furthermore, this is backed up by Glass (1997) who reiterated for the efficacy of interactional feedback facilitated language development. Research on interaction hypothesis has shown types of interactional feedback and empirical evidence for the impact on comprehension (Loschky, 1994) and L2 development (Ellis et al., 1994, Mackey & Oliver, 2002). Also the results have shown that different types of feedback improve second language learning in different levels. In this current research, only one type (recast) of interactional feedback will be emphasized to investigate the most effective benefit for language acquisition because the previous research had different findings on the effectiveness of recast. To show the different effectiveness of interactional feedback, the next part will illustrate the different types and their effectiveness.

Carroll and Swain (1993) investigated the influence of feedback on the ability of adult ESL learners to identify verbs that change and that do not change in dative sentences. They compared 5 groups of participants; four groups received four feedback conditions and the fifth group functioned as the control group. The study results showed that recast was able to cause some forms of changes in learners' interlanguage at least on a short-time basis.

Recasts

It is explained differently according to different points of view towards recasts. This can be explained by Lyster and Ranta (1997) that recast includes the teacher's implicit provision of an accurate reformulation of all or part of a student's incorrect formed utterance. Furthermore, Long (1996) suggested that recasts are statements that rephrase a child's statement by changing one or more sentence components while still referring to its essential meaning. There is also evidence from Braid (2002) which suggests that recast is a response which perceived as a recast if it's combined with content words of the quickly incorrect NNS utterance, also changed and corrected the utterance in different ways such as phonological, syntactic, morphological, or lexical. The example is from Sheen (2007) extract illustrate the usage of recast as follow:

S: The boy have many flowers in the basket.

T: Yes, the boy has many flowers in the basket. (recast)

The teacher reforms the student's utterance without explanation which leads to confusing ideas for the students with many researchers showing interest in investigating the effectiveness of recast including this study.

Selective Attention

Selective Attention has been identified as cognitive process that mediates input and L2 development through interaction (e.g. Gass and Varonis 1994; Long, 1996; Schmidt, 2001; Robinson, 2003; Phil 2003). Learners' attention to recasts will be transcribed from audio record and count as uptake. Dörnyei (2005) defines individual differences as the characteristics of each person in behaviorism, cognitive ability, interest, and personality. Additionally, it has been focused on as a second language learning research type to discover the most important factors which help learners to

acquire language effectively (Schuman, 2001). There are various different points of view toward individual differences. According to Dörnyei (2005), individual differences are classified into five types: (a) language aptitude which is concerned with the achievement of learning language especially cognitive abilities such as working memory, selective attention, and word recognition; (b) motivation which is viewed as affective variable to succeed in learning language; (c) learning styles which are regarded as the preferences of learning language; (d) learning strategies refer to a particular learning way of achieving the language acquisition; and (e) anxiety which is regarded as an uncertainty of learner toward learning language. This study will further investigate the language aptitude in the aspect of individual differences in selective attention as cognitive and psychological variables affect how learners learn language successfully.

Research Questions

To answer these questions, six hypotheses are tested. The first hypothesis is that learners will show more development and uptake in salient and frequent (S/F) morphosyntactic structure more than salient but non-frequent structure (S/NF), non-salient but frequent structure (NS/F), non-salient and non-frequent structure (NS/NF). The second hypothesis is that learners will show more development and uptake in the morphosyntactic target structure in S/NF group more than NS/F group and NS/NF group. The third hypothesis is that learners will show more development and uptake in the morphosyntactic target structure NS/F group than NS/NF group. This study aims to investigate and answer this question; how do different levels of saliency and frequency affect learners' attention to recasts?

Participants

The research populations are first year students who are studying in university in Thailand. The sample is comprised of thirty freshmen from non-English major who are studying in pre-intermediate level at the University in the Northeastern of Thailand. The average of their English language proficiency is lower intermediate which is classified by their English test score for University Admission examination. The participants generally have about 10 years for experience in English language learning. The participants will have treatment tasks and receive recast during interactional task. There are 12 males and 18 females and their average age was 18.

Data Collection Procedures

The effects of interactional feedback recasts on the acquisition of two different grammatical structures (past tense irregular verbs and comparative adjective "er", "more") are investigated in a quasi-experimental design. Participants are assessed by pretest, then receive the treatment and complete the posttest. The result from pretest and posttest are compared to find the differences in order to see the improvements of the students' language learning performance. The independent variable is the frequency and saliency of the target structures. The dependent variable is the score of the posttest. There are three main phrases in this study. They include the pretest, treatment and protest. The pretest is given a week before the treatment phrase. The treatment phrase includes two sessions; past simple tense and comparative adjective.

Participants received two practice tasks of irregular past simple tense and comparative adjective. After the treatment phase, there is a posttest.

Target structure forms

The current study aims to investigate how saliency and frequency affect to language learning development so the criteria of target structure base on the saliency and frequency. S/F group comprises of twenty irregular verbs classified by the frequency of occurrences from the corpus of contemporary American English (COCA). S/NF group represents twenty irregular verbs which are classified by COCA with number of occurrences less than 40,000 times from the word list. NS/F group consists of twenty adjective chosen from word list in British National corpus (BNC) database in 1000 word level. NS/NF group represent twenty adjective chosen from BNC database in the frequency above 1000 word level for the word list.

Past Tense irregular verbs

The irregular past simple tense was selected for two main reasons. The first reason is the nature of the structure. The irregular past simple tense is considered as a salient grammatical structure because it is obvious for learners and acquired easier than grammatical non-salient structure (DeKeyser, 1995). For example, I *went* to Central Plaza yesterday (Hewings, 2005). The second reason is because the target structure in their course syllabus and they seem to have difficulties in learning them. Irregular past tense is considered as salient feature because there is a clear rule of fix form of each verb and the rules are set and easy to understand and results in learning as an explicit knowledge.

Comparative adjective

The comparative adjective is the other target structure. It is considered to be a non-salient structure according to the suggestion from Ellis (2001) who explains and distinguishes the error types when learners use comparative. He suggested that ESL students can make different types of errors such as omission, double marking, regularization, and misrepresentation. He explains that omission arises when learners do not use both “er” and “more” for comparative. Double marking occurs when learners use both “er” and “more” for one comparative adjective. Regularization happens when learners overuse the morphological markers with adjective; for example handsomer. Misrepresentation is seen when learners substitute a phrasal comparative marker for the morphological marker for example “more smarter”. Yang & Lyster (2010) also suggest that comparative adjectives are non-salient feature because it is complex and unpredictable characteristics of comparative adjective ; add – er the base form of adjective or put – more in front of adjective.

Treatment Tasks

Story telling exercise

This exercise will be conducted to elicit learners’ oral production. Students are showed the target irregular verbs which display in a picture. Each student narrates a short story by using a verb in past tense form and pictures provided. The reason of providing a picture is to help participant narrate a story easier without concerning

about vocabulary so that they can focus on past simple tense form. Learners tell a story by using past action. The opening words of the story are set as “Yesterday, I went to Central Plaza with my friend and we...” It is set the beginning of the story because control the use of past tense. When learners make an error, researcher provides learners recasts with the correct form past simple tense form.

Picture description exercise

This exercise will be used to encourage the use of adjective in comparison form. Learners will see a set of pictures accompanied with useful adjectives and describe the pictures to the researcher. The comparison can be made such as “a tiger is more dangerous than a cat”. When learners make an error, researcher provides learners recasts with the correct form the comparative adjective.

Audio recorder

The audio recorder is a digital recorder that was used to record during the treatment task. Some interaction conversation in interactional tasks will be transcribed and checked whether learner modified their utterance after hearing recasts. It was also used for scoring to compare learners’ speech development.

Data Collection and Research Design

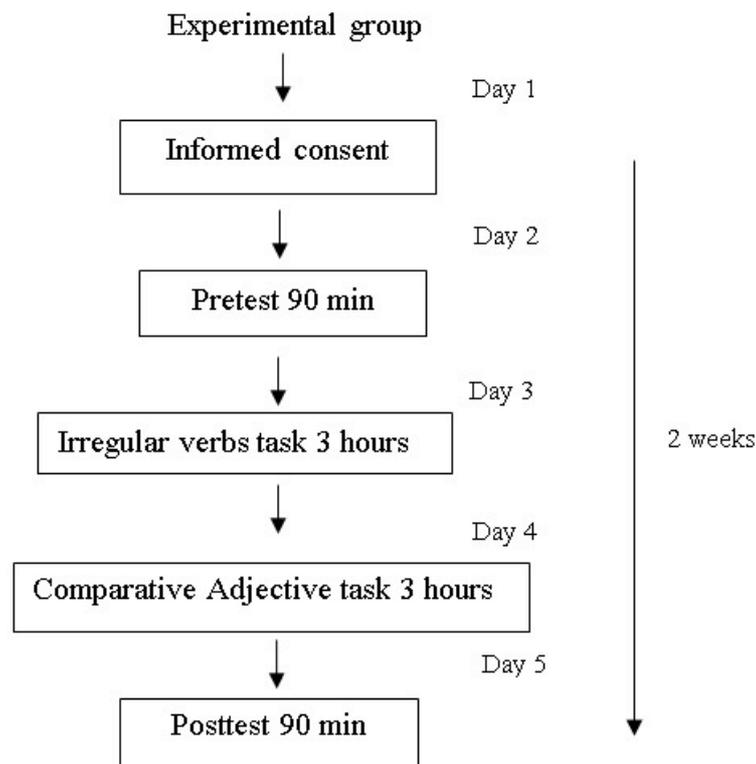


Figure 1 Experimental procedure and approximate times

Data Analysis Procedures

SPSS version 19.0 statistical software was used for statistical analysis. The increase of scores was calculated by subtracting post-test scores with pre-test scores. Then the difference of increase among the target structures was analyzed using the Linear Mixed Model procedure, in which the subject was treated as a random factor. Uptake is operationalized as verbal respond by learner follows the teacher immediately after receiving feedback. The numbers of uptake are counted to indicate the attention of learners to interactional feedback recasts. Learners' attention to recasts will be transcribed from audio record and count as uptake. The use of irregular past simple tense and comparative adjective are counted by tokens.

Results

The average increase of grammar test and speaking test scores were shown in Table 1. Nearly all students performed better for the post-test as 27 out of 30 students had increased scores in every target structure. The maximum increase was found in S/F group for both grammar and speaking tests. Significant difference among the increase of grammar test scores was found in every pair comparison ($P < 0.05$), except for the comparison between NS/F and NS/NF group. Table 1 presents a comparison of the number of student's uptake. A large portion of students' uptake in SF (72.27 %) outperformed other target structures group; S/NF (42.47 %), NS/F (49.54%) and NS/NF (40.17%).

Table 1 Student uptake means and SD deviation.

Structure	n	Recasts	Uptake
S/F	30	101	73
S/NF	30	113	48
NS/F	30	109	54
NS/NF	30	117	47

Table 2 shown significant increases of scores which were calculated by subtracting post-test scores with pre-test scores.

The one-way repeated-measures ANOVA shows that test score in four target structures are significantly different, $F(3, 87) p = 0.000$. Repeated-measures t-test (using a Bonferroni adjustment, $\alpha = .05/4 = 0.0125$) showed that participants outperform in SF structure significantly than NSNF: $t(29) = 4.920$, $p = 0.000$, SF versus SNF: $t(29) = 3.734$, $p < 0.001$, SF versus NSF: $t(29) = 3.796$, $p < 0.001$, SNF versus NSF: $t(29) = -.718$, $p < .479$, SNF versus NSNF: $t(29) = .458$, $p < .650$, NSF versus NSNF: $t(29) = 1.373$, $p < .180$

Table 2 Paired Sample Test of Pretest and Posttest of Each structure

Structure		Pretest	Posttest	Score increase	Sig. (2-tailed)
SF	Written	3.63	9.03	5.40	.000
	Spoken	1.90	4.70	2.80	.000
SNF	Written	4.03	8.70	4.66	.000
	Spoken	1.40	3.93	2.53	.000
NSF	Written	4.56	8.43	3.86	.000
	Spoken	1.90	4.26	2.36	.000
NSNF	Written	4.36	8.40	4.03	.000
	Spoken	1.33	3.76	2.43	.000

Discussions

The S/F grammatical structure group outperformed the other groups by making significant gain in both grammatical judgment and spoken tests. Additionally, only SF structure showed significant between group differences among 4 groups (SF, SNF, NSF, and NSNF). The findings indicate that saliency and frequency may effect on learners' attention to recast which can lead to language development which showed that learners gain greater than other structures. The superior performances of SF structure over other structures may be due to the fact that participants were pushed to retrieve target forms that already existed in their long-term memory and also. The saliency of target structure is clear and easier for participants to notice. This can support the suggestion of Goldschneider and DeKeyser (2001) that attention is associated with saliency and frequency of structures. Regarding to research question how do different levels of saliency and frequency affect learners' attention to recasts? The findings of this study reveal advantages of saliency and frequency of the target structure which has to be salient and learners need to exposure with the structures as much as possible then it may lead to better leaning. Learners in the current study could be considered to improve their language learning in the target structure which is salient and expose them frequently to pay more attention and be able to notice easier than other morphosyntactic structures.

Limitations

The results from this study must be considered with caution. First, the study comprised of a small number of participants. Any generalization of the results should take learner's characteristics and their instructional context into consideration. Second, some of learners did not practice and have a test on the same date which may affect how their test scores. So, researchers may be cautious to the test for all learners.

Pedagogical Implications

Regardless of the limitations, certain pedagogical implications can be drawn from this study. Teachers should give feedback to the students in the most effective method because it can motivate learners to learn more. In addition, it is also essential to let students know when they have made a mistake so that they will learn from it and take corrective measures. Therefore, the results of this study will help teachers to learn more about monitoring students' learning and give them feedback which can be given to individual students, group of them, or the entire class. It would be more efficient if the whole class can share in the monitoring process and the feedback. Teachers in ESL and EFL classrooms can apply this teaching technique in their classroom activities as frequently as possible for each and every assignment in the process of acquiring proficiency especially speaking skills with new material.

Conclusion and Further Research

The current study examined structures which have both saliency and frequency in the word list. Although previous interaction research revealed in the background of the study support the relationship between interaction and learning, it is still important to continue investigating how saliency and frequency play a role in language development. Learners in the current study could be described as pre-intermediate. It could be possible that they need more practice in speaking and interaction. As a result, the stories telling and picture description tasks may have been appropriate for more advanced learners. However, this issue remains to be investigated in the future about the differences between saliency and frequency. The study suggests that recasts may lead to more uptakes because they are focused on a single linguistic feature and the reformulated item is salient to learners.

References

- Ayoun, D. (2001). The Role of Negative and Positive Feedback in the Second Language Acquisition of the "Passe Compose" and the "Imparfait.". *Modern Language Journal*, 85(2), 226-243.
- Basic Education Core Curriculum (2008). The Ministry of Education
- Bassiri, M. (2011). Interaction Feedback and the Impact of Attitude and Motivation on Noticing L2 form. *English Language and Literature studies*.1(2), 61-73.
- Baddeley, A.D. and Hitch, G.J. (1974). Working memory. *Psychology of Learning and motivation*. Academic press,47-89
- Bergsleithner, J. (2011). The role of noticing and working memory capacity in L2 oral performance. *Organon, Porto Alegre Julbo-dezembro*, 217-243.
- Braidi, S.M. (2002). Reexamining the role of recasts in native-speaker/non-native speaker interactions. *Language Learning*, 52, 1-42.
- Broadben, D. (1958). *Perception and communication*. London: Pergamon Press.
- Carrol, S., & Swain, M. (1993). Explicit and implicit negative feedback; an empirical study of the learning of linguistic generalizations. *Studies in Second Language Acquisition*, 15, 357-386.
- Carter, Ronald and Nunan, David. 2001. *The Cambridge Guide to Teaching English to Speakers of Other Languages*. Cambridge: Cambridge University Press.
- Dörnyei, Z. (2005). *The psychology of second language acquisition*. Oxford: Oxford University Press.
- Doughty, C., & Varela, E. (1998). Communicative focus on form. In C. Doughty & J. Williams (Eds.) *Focus on form in classroom second language acquisition* (114-138). Cambridge, UK: Cambridge University Press.
- De Forte, J. W., (2001). The role of working memory in visual selective attention. *Goldsmiths Research*, 2912, 1803-1806.
- Dekeyser, R. (1998). Beyond focus on form: Cognitive perspectives on learning and practicing second language grammar. In C. J. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition*, 42-63. New York: Cambridge University Press.
- Ellis, R., Tanaka, Y., Yamazaki, A., 1994. Classroom interaction, comprehension and the acquisition of L2 word meanings. *Language Learning* 44, 449–491.
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.

Ellis, R., (2007). The differential effects of corrective feedback on two grammatical structure. In A. Mackey (Ed.), *Conversational interaction in second language acquisition: A collection of empirical studies*, 407–452. Oxford: Oxford University Press.

Eriksen, C. W., & James, J. D. (1986). *Visual attention within and around the field of focal attention: A zoom lens model*. *Perception & Psychophysics*, 40, 225-240.

Fuchs, M. & Bonner, M. (2001). *Grammar Express*. New York: Addison Wesley Longman.

Foley, A.J. (2005). English in Thailand. [Electronic version]. *Regional Language Centre Journal*. 36 (2), 223-234.

Gass, S. & E. Varonis. (1996). Input Interaction and second language production. *Studies in Second Language Acquisition* 16: 283-302.

Gass, S.M., (1997) *Input, Interaction and the second language learner*. Lawrence Erlbaum Associates, Mahwah, NJ.

Garcia- Mayo ,M.P. and T. Pica. (2005). Interactional strategies for interlanguage communication: do they provide evidence for attention to form? In A. Housen and M. Pierrard (eds.) *Investigations in Instructed Second Language Acquisition*. Studies on Language Acquisition Series. Berlin: Mouton de Gruyter.

Goldschneider, J.M. and Dekeyser, R.M. (2001). *Explaining the natural order of L2 morphoem acquisition in English: A meta-analysis of multiple determinants*. *Language learning*, 51:1, 1-50

Han, J. K. and L.S. Verplaetse (eds.) (2000). *Second and Foreign Language Learning through classroom interaction*. Manwah, N.J. Lawrence Erlbaum Associates.

Han, Z. (2002). A study of the impact of recasts on tense consistency in L2 output. *TESOL Quarterly*, 36, 542-572.

James,W. (1890). *Principle of Psychology*. Harvard: Cambridge.

Kastner, S., & Pinsk, M. A. (2004). Visual attention as a multilevel selection process. *Cognitive, Affective, & Behavioral Neuroscience*, 4, 483-500.

Khamkhien, A. (2010). Teaching English speaking and English speaking tests in Thai context: A reflection from Thai perspective. *Canadian Center of Science and Education*. 3(1), 184-190.

Kim, H. and G. Matches. 2001. Explicit versus implicit corrective feedback. *The Korea TESOL Journal* 4:1-15.

Leeman, J. (2000). Towards a new classification of input. An empirical study of the effect of recast, negative evidence , and enhanced salience on L2 development. Unpublished doctoral dissertation, Georgetown University, Washington, DC.

Lennon, P. (1990). Investigating fluency in EFL: A quantitative approach. *Language Learning*, 40, 387-417.

Long, M. (1981). Input, interaction and second language acquisition. In H Winitz(ed.) *Native language and foreign language acquisition*. Annals of the New York Academy of Science, 379.

Long, M. H. (1996). The role of the linguistic environment in second language acquisition in W.C. Ritchie and T.K. Bhatia (eds): *Handbook of Second Language Acquisition*. New York: Academic Press, pp. 413-468

Long, M., Inagaki, S., & Ortega, L. (1998). The role of implicit negative feedback in SLA: Models and recasts in Japanese and Spanish. *Modern Language Journal*, 82, 357-371.

Loewen, S. & Nabei, T. (2007). Measuring the effects of oral corrective feedback on L2 knowledge. In A. Mackey (Ed.), *Conversational interaction in second language acquisition: A collection of empirical studies*, 361–377. Oxford: Oxford University Press.

Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413-468). San Diego, CA: Academic Press.

Long, M. (1996). The role of the linguistic environment in second language curves: A test of the instance theory automaticity, *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 18, 883-914.

Long, M., & Robinson, P., (1998). Focus on+ form: Theory, research and practice. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition*. 15-41. Cambridge, UK: Cambridge University Press.

Long, M. (2006). *Problems in SLA* Lawrence Erlbaum Associates, Mahwah, NJ.

Loschky, L.C., (1994). Comprehensible input and second language acquisition: what is the relationship? *Studies in Second Language Acquisition* 16, 303-325.

Lyster, R., Ranta, L.,(1997). Corrective feedback and learner uptake: negotiation of form in communicative classroom. *Studies in Second Language Acquisition*. 19, 37-66.

Mackey, A., Oliver, R., (2002). Interactional feedback and children's L2 development. *System*, 30, 459-477.

Mackey, A., Adams, R., Stafford, C., & Winke, P. (2010). Exploring the relationship between modified output and working memory capacity. *Language Learning*, 60, 501-533.

McDonough, K. (2007). Interactional feedback and the emergence of simple past activity verbs in L2 English. In A. Mackey (Ed.), *Conventional interaction in second language acquisition: A collection of empirical studies* (pp.323-338). Oxford : Oxford University Press.

Merphy, R. (2012). *English Grammar in Use*. A self –study reference and practice book for intermediate learners of English. Cambridge, UK: Cambridge University Press.

Naturwissenschaften, D. (2010). The Relationship between working memory and selective attention. *Konstanzer online pulication*, Retrieved from http://kops.ub.uni-konstanz.de/bitstream/handle/urn:nbn:de:bsz:352-opus-117395/Diss_Saad.pdf?sequence=1

Nicholas, H., Lightbrown, P., & Spada, N., (2001). Recasts as a feedback to language learners. *Language learning*, 15(4), 719-758.

Nunan, D. (2003). The impact of English as a global language on education policies and practices in the Asian- Pasific Region. *TESOL Quarterly*, 37(4), 589-613.
Pica, T. et al (1986). Making input comprehensible: do interactional modifications help? *ITL Review of Applied Linguistics*, 72, 1-25.

Pugh, K. R., Shaywitz, B. A., Shaywitz, S. E., Fulbright, R. K., Byrd, D., Skudlarski, P., et al.(1996). Auditory selective attention: An fMRI investigation. *NeuroImage*, 4, 159-173.

Rassaei, E. (2013). Corrective feedback, learner’s perception, and second language. *System*, 41, 472-483.

Robinson, P. (2002b). Learning conditions, aptitude complexes and SLA: A framework for research and pedagogy. In P. Robinson (Ed.), *Individual differences and instructed language learning* (pp.113-136). Amsterdam: John Benjamins.

Robinson, P. (2003). Attention and memory during SLA in C. Doughty and M. Long (eds): *Handbook of Second Language Acquisition*. Oxford: Blackwell Publishing, pp. 631-678

Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3-32). Cambridge: Cambridge University Press.

Schuman, J. H. (2001). Appraisal psychology, neurobiology, and language. *Annual Review of Applied Linguistic*. 21, 23-42.

Sheen, Y. (2007). The effects of corrective feedback, language aptitude and learner attitudes on the acquisition of English articles. In A. Mackey (Ed.), *Conversational interaction in second language acquisition: A collection of empirical studies*, 301–322. Oxford: Oxford University Press.

Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. Gass & C. Madden (Eds.), *Input in second language acquisition* (pp.235-253). Rowley, MA: Newbury House.

Swain, M. (1995). Three functions of output in second language learning. In G. Cook & B. Seidlhofer (Eds.), *Principle and practice in applied linguistics: Studies in honor of H. G. Widdowson* (pp. 125-144). Oxford: Oxford University Press.

Styles, E. A. (2005). *Attention, Perception and Memory*. New York: Psychology press.

Tawilapaku, Upsorn. (2003). *The use of English tense of Thai university students*. M.A. thesis, Thammasart University, Bangkok.

Tomasi, D., Chang, L., Caparelli, E. C., & Ernst, T. (2007). Different activation patterns for working memory load and visual attention load. *Brain Research*, 1132, 158-165.

Trofimovich, P., Ammar, A., & Garbonton, E. (2007). How effective are recasts? The role of attention, memory and analytic ability in A. Mackey (ed.). *Conversational interaction in Second Language Acquisition: A Collection of Empirical Studies*. Oxford: Oxford University Press.

Wood, J. N., & Grafman, J. (2003). Human prefrontal cortex: Processing and representational perspectives. *Nature Reviews Neuroscience*, 4, 139-147.

Witiyachira, A. (200). *English language teaching and learning in Thailand in this decade*. Thai TESOL focus. 15(1),4-9

Yang, Y. & Lyster, R. (2010). Effects of form-focused practice and feedback on Chinese EFL learners' acquisition of regular and irregular tense forms. *Studies in Second Language Acquisition*, 32, 235-263.

Yli-Krekola, A., Sarela, J., & Valpola, H., (2009). Selective attention improves learning. *Lecture Notes in Computer Science*, 2769, 285-294. Retrieved from http://link.springer.com/chapter/10.1007/978-3-642-04277-5_29.

Yilmaz, Y., & Yuksel, D. (2011). Effects of communication and salience on recasts : A first exposure study, *Language Teaching Research*, 15, 457-478.